

**REMARKS**

Claim 56 has been canceled. Applicants reserve the right to file the subject matter of claim 56 in one or more continuation applications claims priority to the instant application.

Claim 59 has been allowed. The Examiner has objected to claims 35 and 36. Claims 1-4, 6, 7, 9-38, 50, and 52-59 remain pending in this application.

**Rejections Under 35 U.S.C. §112, ¶ 1**

Claims 1-4, 6, 7, 9-34, 37, 38, 50, and 52-58 have been rejected under 35 U.S.C. §112, ¶ 1. The Office Action asserts that the specification does not reasonably provide enablement for a mold as generically claimed.

Applicants respectfully disagree. The specification discloses that molds of the invention can be used to guide a ceramic precursor so as to position the ceramic precursor in a pattern at a predetermined region or regions approximate a substrate surface (e.g., page 7, lines 28-32). The specification also discloses that substrate materials and article materials (where the article may include a mold) can be formed from a variety of materials, for example, silicon, silicon dioxide, silicon nitride, polymers, and metals (e.g., page 11, lines 2-5). Accordingly, it is believed that the specification enables one of ordinary skill in the art to, at least, provide a mold, and fill the mold with a ceramic precursor. It is therefore respectfully requested that the rejection of these claims under 35 U.S.C. §112, ¶ 1 be withdrawn.

**Rejections Under 35 U.S.C. §102(b)**

The Examiner rejected claims 1-4, 6, 7, 9, 18, 19, 21, 22, 25, 26, 32, 33, and 56 under 35 U.S.C. §102(b) as being anticipated by Fain, et al, U.S. Patent No. 5,340,515 ("Fain"). The Office Action asserts that Fain discloses heating a ceramic precursor under an atmosphere that is inert and non-oxidizing.

Even assuming this to be the case (which Applicants do not concede), Applicants do not see where in Fain is a moisture-free atmosphere disclosed or suggested. The Office Action appears to be of the position that an inert or a non-oxidizing atmosphere inherently is a moisture-free atmosphere. The Office Action states, "Note that a moisture containing atmosphere would not be inert because the mold is made from carbon which would react with moisture." However,

the Patent Office has not explained why a mold fabricated from carbon would necessarily inherently result in use of the mold in a moisture-free atmosphere. It would appear that the selection of materials of a mold is independent of the selection of atmospheric conditions surrounding the mold. Thus, Applicants do not see how the disclosure that a mold fabricated from carbon would necessitate that the atmosphere surrounding the mold be free of moisture, as is required in an inherency rejection. Accordingly, it is believed that this rejection is improper. Furthermore, Applicants further note that the oxidizing nature of an atmosphere typically is related to the presence of oxygen or another oxidizing species, and not necessarily to the presence of moisture. Accordingly, it is not seen how disclosure of an oxidizing atmosphere inherently is disclosure of moisture. Thus, for at least these reasons, it is respectfully requested that the rejection of independent claim 1 and dependent claims 2-4, 6, 7, 9, 18, 19, 21, 22, 25, 26, 32, and 33 (which each directly or indirectly depend on claim 1) be withdrawn.

With respect to the rejection of independent claim 56, claim 56 has been cancelled, rendering the rejection moot.

#### Rejections Under 35 U.S.C. §103(a)

The Examiner rejected claim 50 under 35 U.S.C. §103(a) as being unpatentable over Furlani, et al., U.S. Patent No. 5,893,206 ("Furlani") in view of Stephens, U.S. Patent No. 5,219,925 ("Stephens").

The Office Action has not pointed to a suggestion or motivation in either Furlani or Stephens to combine these references, as is required under 35 U.S.C. §103(a). The Office Action asserts that it would have been obvious to use the mold of Furlani with the mixtures of Stephens. However, Furlani is directed towards the molding of materials such as electrically conductive or ferromagnetic materials, using a block containing a cavity (i.e., a mold) which can be ceramic, while Stephens is directed toward the molding of materials such as synthetic elastomers using a mold that can be made of steel, and in particular a mold release composition to prevent sticking of the mold to the molded material. It is not seen how it would have been obvious to one of ordinary skill in the art to combine a process for preventing elastomers from sticking to steel molds, as described in Stephens, with a process for molding electrically-conductive or ferromagnetic materials from molds that can be ceramic. For example, nowhere in Furlani is

there a disclosure or suggestion of materials that stick to molds. Absent such a disclosure or suggestion or other motivation, the Office Action has not met its *prima facie* burden of obviousness, as is required under 35 U.S.C. §103(a).

Even assuming, for the sake of argument, that Furlani and Stephens could be combined in the manner suggested in the Office Action (which Applicants do not concede), it is not seen how the combination of Stephens and Furlani would reach the claimed invention.


### CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' representatives at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time.

If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,  
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